

Attorney Docket No.: 01CON263P
Application Serial No.: 09/990,059

List of Claims:

Claim 1 (Currently Amended): A communication system for transferring data through a digital switching network, said communication system comprising:

a client modem;

a linecard in communication with said client modem over a local loop; and

a linecard modem interfacing with said linecard and said digital switching network;

wherein said linecard generates a dial tone and a linecard indication indicative of existence of said linecard modem in response to said linecard detecting said client modem being in an off-hook state;

wherein said client modem modulates client data to generate modulated client data for transmission to said linecard over said local loop, and wherein said linecard modem receives said modulated client data from said linecard and demodulates said modulated client data to generate said client data for transmission through said digital switching network.

Claim 2 (Original): The communication system of claim 1, wherein said linecard includes a conversion module capable of generating digitized analog samples of linear/uniform spacing.

Claim 3 (Original): The communication system of claim 1, wherein said linecard modem modulates network data from said digital switching network to generate modulated

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network data for transmission to said client modem over said local loop, and wherein said client modem receives and demodulates said modulated network data to generate said network data.

Claim 4 (Original): The communication system of claim 1, wherein said linecard modem is a component of said linecard.

Claim 5 (Original): The communication system of claim 1, wherein said linecard modem supports a maximum data rate of about 64kbps.

Claim 6 (Original): The communication system of claim 1, wherein said linecard modem supports a maximum data rate of about 128kbps.

Claim 7 (Original): The communication system of claim 1, wherein said linecard modem and said client modem connect at a speed equal or less than a maximum network speed determined by said linecard modem.

Claim 8 (Currently Amended): A linecard for terminating a local loop used for communication of data between a client modem and a digital switching network, said linecard comprising:

- an interface circuitry for terminating said local loop; and
- a linecard modem interfacing with said interface circuitry;

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a conversion module in communication with said client modem, said conversion module being capable of generating digitized analog samples of linear/uniform spacing;

wherein said ~~client~~ linecard modem ~~modulates client data to generate~~ receives modulated client data ~~for transmission to~~ from said ~~linecard~~ client modem over said local loop, and wherein said linecard modem demodulates said modulated client data to ~~generated~~ generate said client data for transmission through said digital switching network.

Claim 9 (Currently Amended): The linecard of claim 8, wherein said linecard modem modulates network data to generate modulated network data for transmission to said client modem over said local loop, ~~and wherein said client modem receives and demodulates said modulate network data to generated said network data.~~

Claim 10 (Original): The communication system of claim 8, wherein said linecard modem supports a maximum data rate of about 64 Kbps.

Claim 11 (Original): The communication system of claim 8, wherein said linecard modem supports a maximum data rate of about 128 Kbps.

Claim 12 (Original): The communication system of claim 8, wherein said linecard modem supports one or more data rates multiple of 64 Kbps.

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Claim 13 (Original): The communication system of claim 8, wherein said linecard modem and said client modem connect at a speed equal or less than a maximum network speed determined by said linecard modem.

Claim 14 (Original): The communication system of claim 8, wherein said linecard modem and client modem support V.92, V.90 or V.34 compatible modulation.

Claim 15 (Original): A communication method for use with a linecard terminating a local loop in communication with a client modem, said linecard interfacing with a linecard modem in combination with a digital switching network, said communication method comprising:

detecting said local loop to be in an off-hook state by said linecard;

transmitting a dial tone by said linecard in response to said detecting;

transmitting a linecard indication indicative of existence of said linecard modem;

receiving a client indication indicative of existence of said client modem;

establishing a connection to said client modem by said line card modem;

receiving modulated client data over said local loop by said linecard modem from said client modem;

demodulating said modulated client data to generate client data by said linecard modem;

and

transmitting said client data through said digital switching network.

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Claim 16 (Original): The communication method of claim 15 further comprising:
receiving network data by said linecard modem from said digital switching network;
modulating said network data to generate modulated network data by said linecard
modem; and
transmitting said modulated network data to said client modem.

Claim 17 (Original): The communication method of claim 15, wherein said linecard
modem is a component of said linecard.

Claim 18 (Original): The communication method of claim 15, wherein said linecard
modem supports a maximum data rate of about 64kbps.

Claim 19 (Original): The communication method of claim 15, wherein said linecard
modem supports a maximum data rate of about 128kbps.

Claim 20 (Original): The communication method of claim 15, wherein said linecard
modem supports one or more data rates multiple of 64kbps.

Claim 21 (Original): The communication method of claim 15, wherein said linecard
modem and said client modem connect at a speed equal or less than a maximum network speed
determined by said linecard modem.

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Claim 22 (Original): The communication method of claim 15, wherein said linecard modem and client modem support V.92, V.90 or V.34 compatible modulation.

Claim 23 (Original): The communication method of claim 15, wherein said linecard indication is generated by said linecard modem.

Claim 24 (Original): The communication method of claim 23, wherein said linecard indication is a tone above 4kHz.

Claim 25 (New): The communication system of claim 1, wherein said client modem transmits a client indication indicative of existence of said client modem in response to said linecard indication, and wherein said client modem and said linecard modem start handshaking without said client modem dialing a number.

Claim 26 (New): The communication system of claim 25, wherein said linecard modem does not generate an answer tone for said handshaking.

Claim 27 (New): The communication system of claim 1, wherein said client modem dials a number in response to said dial tone, and wherein said linecard identifies said number as a modem call and configures said linecard modem to start handshaking with said client modem without generating an answer tone.

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Claim 28 (New): The linecard of claim 8, wherein said linecard generates a dial tone and a linecard indication indicative of existence of said linecard modem in response to said linecard detecting said client modem being in an off-hook state.

Claim 29 (New): The linecard of claim 8, wherein said linecard receives a client indication from said client modem indicative of existence of said client modem in response to said linecard indication, and wherein said linecard modem starts handshaking with said client modem without said linecard receiving tones indicative of said client modem dialing a number.

Claim 30 (New): The linecard of claim 29, wherein said linecard modem does not generate an answer tone for said handshaking.

Claim 31 (New): The linecard of claim 8, wherein said linecard receives tones indicative of said client modem dialing a number in response to said dial tone, and wherein said linecard identifies said number as a modem call and configures said linecard modem to start handshaking with said client modem without generating an answer tone.